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United States Patent [19][11] **Patent Number:** **5,971,952****Medo**[45] **Date of Patent:** **Oct. 26, 1999**[54] **MANUAL BREAST PUMP**5,749,850 5/1998 Williams et al. 604/74
5,843,029 12/1998 Bachman et al. 604/74[76] Inventor: **Elena M. Medo**, 309 Escuela, San Clemente, Calif. 92672*Primary Examiner*—John D. Yasko*Attorney, Agent, or Firm*—Stout, Uxa, Buyan & Mullins, LLP; Donald E. Stout[21] Appl. No.: **09/001,246**[22] Filed: **Dec. 30, 1997**[57] **ABSTRACT****Related U.S. Application Data**

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[51] **Int. Cl.⁶** **A61M 1/06**[52] **U.S. Cl.** **604/74**[58] **Field of Search** 604/73, 74, 75,
604/346

A manual powered breast pump for efficiently removing milk from a patient's breasts which provides additional milk storage capacity. The breast pump includes an outer pumping cylinder, an inner pumping cylinder and pumping seal. The inner pumping cylinder or plunger is generally a hollow cylinder having a closed end and open end. The open end is fitted with a removable cap creating a secondary collection container. The plunger is also fitted with a seal for slidably contacting the interior wall of the hollow outer pumping cylinder. The outer pumping cylinder is fitted with a nipple for connection with a breast flange and an open end for collection with a collection container. A one-way valve is fitted within the outer pumping cylinder to provide for the efficient flow of milk into the collection container and to prevent the return of milk into the breast pump during pumping operations.

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20 Claims, 3 Drawing Sheets